

Claims

1. (Previously presented) A method of preparing circuit layout data for the application of optical and process correction (OPC), comprising:

receiving data that represents a layer of an integrated circuit that is defined as a number of polygons;

fragmenting a polygon into a number of edge segments by defining a number of fragmentation endpoints that extend around the perimeter of the polygon;

defining control sites for the edge segments;

computing a simulation of the layout that estimates light intensity values in an area corresponding to a control site of at least one of the edge segments;

calculating a curvature of the light intensity in a direction parallel to the at least one edge segment at the control site; and

using the curvature of the light intensity to adjust the number of fragmentation endpoints on the perimeter of the polygon.

2. (Currently amended) The method of Claim 1, wherein the number of fragmentation endpoints is adjusted by:

adding one or more fragmentation endpoints to ~~[[a]]~~ the perimeter of the polygon if the curvature of the light intensity calculated at a position corresponding to a control site for an edge segment is greater than a predetermined threshold.

3. (Previously presented) The method of Claim 1, wherein the number of fragmentation endpoints is adjusted by:

calculating a curvature of the light intensity at a position corresponding to the control site and in a direction parallel to an adjacent edge segment; and

removing one or more fragmentation endpoints from the perimeter of the polygon if the curvature of the light intensity calculated at a position of the control sites defined for adjacent edge segments is less than a predetermined threshold.

4. (Canceled)

5. (Previously presented) A computer storage medium including a sequence of program instructions recorded thereon that, when executed by one or more processors, cause the one or more processors to implement the method of any of Claims 1-3.

6.-7. (Withdrawn)

8. (Currently amended) A method for preparing data that describes a layout of an integrated circuit by:

fragmenting polygons that describe structures to be created via photolithography;
performing an initial fragmentation that divides a polygon into a number of edge segments that extend around the perimeter of the polygon;

defining control sites for the edge segments;

computing a simulation of a curvature of an image intensity at a location on a wafer corresponding to a control site in a direction parallel to an edge segment under defined process conditions; and

using the results of the simulation to adjust the fragmentation of the polygon to add fragmentation endpoints on the perimeter of the polygon areas where the curvature of the image intensity is greater than a predetermined amount and/or to remove fragmentation endpoints on the perimeter of the polygon where the curvature of the image intensity is less than a predetermined amount.

9.-11. (Canceled)

12. (Previously presented) A computer storage medium that stores a sequence of program instructions that when executed by one or more computers cause the one or more computers to implement the method of Claim 8.

13. (Withdrawn)